## **Maryland Health Care Commission**

# Primary Percutaneous Coronary Intervention (PCI) Programs in Hospitals without On-Site Cardiac Surgery

### **Quarterly and Annual Data Report**

Source: Maryland STEMI (Primary PCI) Data Registry
Reporting Period: October 1 through December 31, 2007 and calendar year 2007

#### **INTRODUCTION**

In January 2006, the Maryland Health Care Commission began the systematic collection of data on primary PCI services performed at Maryland hospitals without on-site cardiac surgical services under the Commission's primary PCI waiver program. This registry provides data necessary to measure compliance with certain regulatory requirements. Under the waiver program, hospitals without on-site cardiac surgery may provide PCI services to patients meeting certain eligibility criteria:

- Patients with ST-segment elevation myocardial infarction (or new LBBB or ST-depression V1-V2 compatible with true posterior infarction) who are thrombolytic-eligible or -ineligible;
- Patients with acute myocardial infarction and in cardiogenic shock that the treating physician(s) believe may experience a worse outcome if transferred to a tertiary institution because they are too unstable or because a temporal delay in transfer may be harmful; and
- Patients for whom the primary PCI system was not initially available, who received thrombolytic therapy that subsequently failed. These cases should constitute no more than 10 percent of all cases.

During the reporting period, seven hospitals in the Metropolitan Baltimore Region (Anne Arundel Medical Center, Baltimore Washington Medical Center, Franklin Square Hospital Center, Howard County General Hospital, Johns Hopkins Bayview Medical Center, Mercy Medical Center, and St. Agnes Hospital) and four hospitals in the Metropolitan Washington Region (Doctors Community Hospital, Holy Cross Hospital, Shady Grove Adventist Hospital and Southern Maryland Hospital Center) provided PCI services under the waiver program. The following report presents data for these 11 Maryland hospitals. The Commission evaluates the registry data on a quarterly and hospital-by-hospital basis; the fourth-quarter and calendar-year data follow the Discussion. Also provided are data for the previous three quarters that reflect the final corrected data in the 2007 registry database.

#### **DISCUSSION**

Mercy Medical Center relinquished its primary PCI waiver, effective February 26, 2007. During the fourth quarter of 2007, the remaining 10 hospitals providing PCI services

under the primary PCI waiver program entered 284 patients (range: 15-46 per hospital) into the Commission's registry. Of the 274 patients undergoing cardiac catheterization (range: 14-43), 195 (71%) underwent an attempted PCI (range: 8-29). A PCI attempt occurs when a guidewire is placed in the coronary artery whether the guidewire crosses the intended lesion or not and whether a device is utilized or not.

In 2007, the 11 hospitals had 1,039 registrants (including 1 registrant at Mercy Medical Center). A total of 949 (91%) underwent cardiac catheterization; of those, 711 (75%) underwent an attempted PCI. No significant coronary artery disease was the most common reason for not attempting to perform PCI.

During calendar year 2007, four (4) patients who did not meet the inclusion criteria underwent PCI. The electrocardiogram (ECG) of one of those patients was read as non-diagnostic, but, in fact, had some ST-segment elevation of borderline significance.

In 2007, no patients received PCI after unsuccessful or failed thrombolytic therapy (rescue PCI). Thrombolytic therapy was administered in one case as adjunctive therapy during primary PCI; in two cases, thrombolytic therapy was given as primary therapy without subsequent PCI (during the first quarter, one patient at Johns Hopkins Bayview Medical Center, and one patient at Howard County General Hospital).

The Commission requires waiver hospitals in metropolitan regions to perform 49 or more primary PCI cases per year. An institution performing at least 49 cases annually, or approximately one case per week, is more likely to have the logistics and staff available for timely reperfusion of acutely ill patients. Mercy Medical Center provided primary PCI services for a period of less than two months in calendar year 2007; two other waiver hospitals did not meet this requirement: Doctors Community Hospital (35), and Howard County General Hospital (46). It should be noted that Baltimore Washington Medical Center closed its Cardiac Catheterization Laboratory from March 5, 2007 to May 14, 2007, for equipment replacement. The hospital developed a transport plan for any STEMI patient coming to Baltimore Washington Medical Center during the construction, and those patients were transferred to other facilities for treatment.

Numerous scientific studies demonstrate that the more prompt the treatment of STEMI patients, the more likely they will be to survive the infarct. Professional practice guidelines for cardiologists and cardiac interventionalists call for providing primary angioplasty to STEMI patients within 90 minutes of presentation. The Commission's waiver program requires that 80% of appropriate patients should receive primary PCI services within 120 minutes or less of their arrival at the hospital. Door-to-balloon (DTB) time is typically recorded as the difference in minutes between the patient's arrival in the hospital emergency room and the time of first device use. The first device used is almost always a balloon-type device, but occasionally is a thrombectomy device. In the Commission's registry database,

2005, 52. Available at: http://www.acc.org/clinical/guidelines/percutaneous/update/index.pdf

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<sup>&</sup>lt;sup>1</sup> SC Smith Jr, TE Feldman, JW Hirshfeld Jr, et al., ACC/AHA/SCAI 2005 Guideline Update for Percutaneous Coronary Intervention: A Report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines (ACC/AHA/SCAI Writing Committee to Update the 2001 Guidelines for Percutaneous Coronary Intervention),

exceptions to this calculation method most commonly occur when the patient arrives with a *history* of chest discomfort but a normal or non-diagnostic initial (first) ECG. *If and only if* the first ECG is normal/non-diagnostic *and* is entered into the MHCC registry database for review and confirmation along with a second ECG showing STEMI, then the date and time of the second (diagnostic) ECG are used as the "door" or "clock start" time to calculate DTB time. This same algorithm is applied to patients already hospitalized: the "door" ECG is the first ECG recorded showing STEMI. In calendar year 2007, all of the waiver hospitals met the 80% threshold for DTB time.

In June and July 2007, hospitals that had not met the required institutional volume or DTB time received extensions of their waivers until January 31, 2008, under certain circumstances and conditions. The Commission will review the registry data covering the period from April 1 through December 31, 2007, to determine whether each of the hospitals has attained compliance with the regulatory requirements and met the conditions of the waiver.

Table 1. Numbers of registrants, STEMI patients, NSTEMI patients, catheterized (cathed) patients, and patients for whom PCI was attempted at Maryland hospitals performing primary PCI under waivers from the Maryland Health Care Commission, October 1 – December 31, 2007 and calendar year 2007.

					PCI
4th Quarter 2007 (October 1 - December 31)	Registrant <sup>1</sup>	STEMI <sup>2</sup>	NSTEMI <sup>3</sup>	Cathed <sup>4</sup>	Attempt <sup>5</sup>
Anne Arundel Medical Center	28	28	0	28	20
Baltimore Washington Medical Center	37	37	0	35	25
Doctors Community Hospital	15	15	0	14	8
Franklin Square Hospital Center	46	46	0	43	29
Holy Cross Hospital	26	26	2	25	19
Howard County General Hospital	23	23	0	21	12
Johns Hopkins Bayview Medical Center	31	31	1	30	22
Mercy Medical Center					
St. Agnes Hospital	23	23	0	23	18
Shady Grove Adventist Hospital	32	32	0	32	27
Southern Maryland Hospital Center	23	23	0	23	15
CY 2007 (January 1 - December 31)					
Anne Arundel Medical Center <sup>6</sup>	125	113	1	114	94
Baltimore Washington Medical Center <sup>7</sup>	119	119	0	97	70
Doctors Community Hospital	65	65	0	57	35
Franklin Square Hospital Center	144	144	0	130	95
Holy Cross Hospital <sup>8</sup>	86	85	2	82	53
Howard County General Hospital	84	84	0	73	47
Johns Hopkins Bayview Medical Center9	98	98	1	87	70
Mercy Medical Center <sup>10</sup>	1	1	0	1	1
St. Agnes Hospital	105	105	0	103	77
Shady Grove Adventist Hospital	109	109	0	107	97
Southern Maryland Hospital Center	103	103	0	98	72

<sup>&</sup>lt;sup>1</sup> Registrant – patient entered in MHCC Registry.

<sup>&</sup>lt;sup>2</sup> STEMI – registrant presenting with ST-segment elevation myocardial infarction.

<sup>&</sup>lt;sup>3</sup> NSTEMI – registrant without documented STEMI.

<sup>&</sup>lt;sup>4</sup> Cathed – registrant undergoing diagnostic cardiac catheterization.

<sup>&</sup>lt;sup>5</sup> PCI attempt – any attempt to advance a guidewire across a coronary lesion.

<sup>&</sup>lt;sup>6</sup> Anne Arundel Medical Center performed PCI on patient with ST-elevation of borderline significance during the first quarter. The patient had a DTB time of 72 minutes.

<sup>&</sup>lt;sup>7</sup> Baltimore Washington Medical Center closed its Cardiac Catheterization Laboratory for equipment replacement from March 5, 2007 to May 14, 2007.

<sup>&</sup>lt;sup>8</sup> At Holy Cross Hospital (HCH), during the first quarter, one patient had new left bundle branch block (LBBB), which is an inclusion criterion for the registry. HCH performed PCI on 2 NSTEMI patients during the fourth quarter. The first patient had a DTB time of 85 minutes, and the second patient had a DTB time of 67 minutes.

<sup>&</sup>lt;sup>9</sup> One NSTEMI patient underwent PCI at Johns Hopkins Bayview Medical Center during the fourth quarter; the patient had a DTB time of 74 minutes.

<sup>&</sup>lt;sup>10</sup> Mercy Medical Center relinquished its primary PCI waiver, effective February 26, 2007.

Table 2. Median door-to-balloon  $^1$  (DTB) times, and number and percentage of patients by DTB  $\leq$  120 minutes or > 120 minutes at Maryland hospitals performing primary PCI under waivers from the Maryland Health Care Commission, October 1 – December 31, 2007 and calendar year 2007. MHCC waiver requirements specify that 80% of appropriate patients should have a DTB time of < 120 minutes.

	Median	<u>&lt;</u> 120	<u>&lt;</u> 120	> 120	> 120
4th Quarter 2007 (October 1 - December 31)	DTB (minutes)	Minutes (N)	Minutes (%)	Minutes (N)	Minutes (%)
Anne Arundel Medical Center	78.5	18	90	2	10
Baltimore Washington Medical Center	71.5	19	86	3	14
Doctors Community Hospital	87	4	50	4	50
Franklin Square Hospital Center	76	25	86	4	14
Holy Cross Hospital	87	19	100	0	0
Howard County General Hospital	84	10	91	1	9
Johns Hopkins Bayview Medical Center	76.5	22	100	0	0
Mercy Medical Center					
St. Agnes Hospital	75	15	83	3	17
Shady Grove Adventist Hospital	89	25	93	2	7
Southern Maryland Hospital Center	89	13	87	2	13
CY 2007 (January 1 - December 31)					
Anne Arundel Medical Center <sup>2</sup>	78.5	83	88	11	12
Baltimore Washington Medical Center <sup>3</sup>	88	58	87	9	13
Doctors Community Hospital	87	30	86	5	14
Franklin Square Hospital Center	89	80	88	11	12
Holy Cross Hospital <sup>4</sup>	95	45	85	8	15
Howard County General Hospital	99	40	87	6	13
Johns Hopkins Bayview Medical Center <sup>5</sup>	97.5	57	86	9	14
Mercy Medical Center <sup>6</sup>	66	1	100	0	0
St. Agnes Hospital	83.5	64	83	13	17
Shady Grove Adventist Hospital	88.5	91	95	5	5
Southern Maryland Hospital Center	86	68	94	4	6

<sup>&</sup>lt;sup>1</sup> Door-to-balloon time – elapsed time from arrival at hospital, if STEMI criteria are met, to time of first device use.

<sup>&</sup>lt;sup>2</sup> Anne Arundel Medical Center performed PCI on patient with ST-elevation of borderline significance during the first quarter. The patient had a DTB time of 72 minutes.

<sup>&</sup>lt;sup>3</sup> Baltimore Washington Medical Center closed its Cardiac Catheterization Laboratory for equipment replacement from March 5, 2007 to May 14, 2007.

<sup>&</sup>lt;sup>4</sup> At Holy Cross Hospital (HCH), during the first quarter, one patient had new left bundle branch block (LBBB), which is an inclusion criterion for the registry. HCH performed PCI on 2 NSTEMI patients during the fourth quarter. The first patient had a DTB time of 85 minutes, and the second patient had a DTB time of 67 minutes.

<sup>&</sup>lt;sup>5</sup> One NSTEMI patient underwent PCI at Johns Hopkins Bayview Medical Center during the fourth quarter; the patient had a DTB time of 74 minutes.

<sup>&</sup>lt;sup>6</sup> Mercy Medical Center relinquished its primary PCI waiver, effective February 26, 2007.

Table 3. Number of patients who underwent PCI at Maryland hospitals performing primary PCI under waivers from the Maryland Health Care Commission, October 1 – December 31, 2007 and calendar year 2007. MHCC waiver requirements specify that institutions should perform an optimum of 49 primary PCI procedures annually except in areas of the state where access to a high-volume program is not readily available.

4th Quarter 2007 (October 1 - December 31)	PCI Cases <sup>1</sup>
Anne Arundel Medical Center	20
Baltimore Washington Medical Center	22
Doctors Community Hospital	8
Franklin Square Hospital Center	29
Holy Cross Hospital	19
Howard County General Hospital	11
Johns Hopkins Bayview Medical Center	22
Mercy Medical Center	
St. Agnes Hospital	18
Shady Grove Adventist Hospital	27
Southern Maryland Hospital Center	15
CY 2007 (January 1 - December 31)	
Anne Arundel Medical Center <sup>2</sup>	94
Baltimore Washington Medical Center <sup>3</sup>	67
Doctors Community Hospital	35
Franklin Square Hospital Center	91
Holy Cross Hospital <sup>4</sup>	53
Howard County General Hospital	46
Johns Hopkins Bayview Medical Center⁵	66
Mercy Medical Center <sup>6</sup>	1
St. Agnes Hospital	77
Shady Grove Adventist Hospital	96
Southern Maryland Hospital Center	72

<sup>&</sup>lt;sup>1</sup> PCI case – registrant who underwent percutaneous coronary intervention. The first device used is almost always a balloon-type device, but occasionally is a thrombectomy device. The overwhelming majority of primary PCI procedures involved a single infarct-related artery (92%), while 7% of patients underwent double-vessel PCI.

<sup>&</sup>lt;sup>2</sup> Anne Arundel Medical Center performed PCI on patient with ST-elevation of borderline significance during the first quarter. The patient had a DTB time of 72 minutes.

<sup>&</sup>lt;sup>3</sup> Baltimore Washington Medical Center closed its Cardiac Catheterization Laboratory for equipment replacement from March 5, 2007 to May 14, 2007.

<sup>&</sup>lt;sup>4</sup> At Holy Cross Hospital (HCH), during the first quarter, one patient had new left bundle branch block (LBBB), which is an inclusion criterion for the registry. HCH performed PCI on 2 NSTEMI patients during the fourth quarter. The first patient had a DTB time of 85 minutes, and the second patient had a DTB time of 67 minutes.

<sup>&</sup>lt;sup>5</sup> One NSTEMI patient underwent PCI at Johns Hopkins Bayview Medical Center during the fourth quarter; the patient had a DTB time of 74 minutes.

<sup>&</sup>lt;sup>6</sup> Mercy Medical Center relinquished its primary PCI waiver, effective February 26, 2007.

Table 1a. Numbers of registrants, STEMI patients, NSTEMI patients, catheterized (cathed) patients, and patients for whom PCI was attempted at Maryland hospitals performing primary PCI under waivers from the Maryland Health Care Commission, January 1 – March 31, 2007.

					PCI
1st Quarter 2007 (January 1 - March 31)	Registrant <sup>1</sup>	STEMI <sup>2</sup>	NSTEMI <sup>3</sup>	Cathed <sup>4</sup>	Attempt <sup>5</sup>
Anne Arundel Medical Center <sup>6</sup>	43	31	1	32	26
Baltimore Washington Medical Center <sup>7</sup>	21	21	0	16	14
Doctors Community Hospital	18	18	0	16	14
Franklin Square Hospital Center	33	33	0	30	24
Holy Cross Hospital <sup>8</sup>	18	18	0	16	11
Howard County General Hospital	21	21	0	17	10
Johns Hopkins Bayview Medical Center	22	22	0	19	19
Mercy Medical Center <sup>9</sup>	1	1	0	1	1
St. Agnes Hospital	27	27	0	27	21
Shady Grove Adventist Hospital	28	28	0	28	28
Southern Maryland Hospital Center	27	27	0	25	16

<sup>&</sup>lt;sup>1</sup> Registrant – patient entered in MHCC Registry.

<sup>3</sup> NSTEMI – registrant without documented STEMI.

<sup>&</sup>lt;sup>2</sup> STEMI – registrant presenting with ST-segment elevation myocardial infarction.

<sup>&</sup>lt;sup>4</sup> Cathed – registrant undergoing diagnostic cardiac catheterization.

<sup>&</sup>lt;sup>5</sup> PCI attempt – any attempt to advance a guidewire across a coronary lesion.

<sup>&</sup>lt;sup>6</sup> At Anne Arundel Medical Center, the ECG of one patient was read as non-diagnostic; in fact, the ECG had some ST-segment elevation of borderline significance.

<sup>&</sup>lt;sup>7</sup> Baltimore Washington Medical Center closed its Cardiac Catheterization Laboratory on March 5, 2007 for equipment replacement.

<sup>&</sup>lt;sup>8</sup> At Holy Cross Hospital, one patient had new left bundle branch block (LBBB), which is an inclusion criterion for the registry.

<sup>&</sup>lt;sup>9</sup> Mercy Medical Center relinquished its primary PCI waiver, effective February 26, 2007.

Table 2a. Median door-to-balloon (DTB) times, and number and percentage of patients by DTB  $\leq$  120 minutes or > 120 minutes at Maryland hospitals performing primary PCI under waivers from the Maryland Health Care Commission, January 1 – March 31, 2007. MHCC waiver requirements specify that 80% of appropriate patients should have a DTB time of  $\leq$  120 minutes.

	Median	<u>&lt;</u> 120	<u>&lt;</u> 120	> 120	> 120
	DTB	Minutes	Minutes	Minutes	Minutes
1st Quarter 2007 (January 1 - March 31)	(minutes)	(N)	(%)	(N)	(%)
Anne Arundel Medical Center <sup>2</sup>	81	23	88	3	12
Baltimore Washington Medical Center <sup>3</sup>	87	13	93	1	7
Doctors Community Hospital	89.5	14	100	0	0
Franklin Square Hospital Center	95	21	100	0	0
Holy Cross Hospital <sup>4</sup>	108	6	55	5	45
Howard County General Hospital	100	10	100	0	0
Johns Hopkins Bayview Medical Center	101	12	71	5	29
Mercy Medical Center <sup>5</sup>	66	1	100	0	0
St. Agnes Hospital	96	15	71	6	29
Shady Grove Adventist Hospital	81	25	93	2	7
Southern Maryland Hospital Center	72	15	94	1	6

<sup>&</sup>lt;sup>1</sup> Door-to-balloon time – elapsed time from arrival at hospital, if STEMI criteria are met, to time of first device use.

<sup>&</sup>lt;sup>2</sup> At Anne Arundel Medical Center, the ECG of one patient was read as non-diagnostic; in fact, the ECG had some ST-segment elevation of borderline significance.

<sup>&</sup>lt;sup>3</sup> Baltimore Washington Medical Center closed its Cardiac Catheterization Laboratory on March 5, 2007 for equipment replacement.

<sup>&</sup>lt;sup>4</sup> At Holy Cross Hospital, one patient had new left bundle branch block (LBBB), which is an inclusion criterion for the registry.

<sup>&</sup>lt;sup>5</sup> Mercy Medical Center relinquished its primary PCI waiver, effective February 26, 2007.

Table 3a. Number of patients who underwent PCI at Maryland hospitals performing primary PCI under waivers from the Maryland Health Care Commission, January 1 – March 31, 2007. MHCC waiver requirements specify that institutions should perform an optimum of 49 primary PCI procedures annually except in areas of the state where access to a high-volume program is not readily available.

1st Quarter 2007 (January 1 - March 31)	PCI Cases <sup>1</sup>
Anne Arundel Medical Center <sup>2</sup>	26
Baltimore Washington Medical Center <sup>3</sup>	14
Doctors Community Hospital	14
Franklin Square Hospital Center	21
Holy Cross Hospital <sup>4</sup>	11
Howard County General Hospital	10
Johns Hopkins Bayview Medical Center	17
Mercy Medical Center⁵	1
St. Agnes Hospital	21
Shady Grove Adventist Hospital	27
Southern Maryland Hospital Center	16

<sup>&</sup>lt;sup>1</sup> PCI case – registrant who underwent percutaneous coronary intervention. The first device used is almost always a balloon-type device, but occasionally is a thrombectomy device.

<sup>&</sup>lt;sup>2</sup> At Anne Arundel Medical Center, the ECG of one patient was read as non-diagnostic; in fact, the ECG had some ST-segment elevation of borderline significance.

<sup>&</sup>lt;sup>3</sup> Baltimore Washington Medical Center closed its Cardiac Catheterization Laboratory on March 5, 2007 for equipment replacement.

<sup>&</sup>lt;sup>4</sup> At Holy Cross Hospital, one patient had new left bundle branch block (LBBB), which is an inclusion criterion for the registry.

<sup>&</sup>lt;sup>5</sup> Mercy Medical Center relinquished its primary PCI waiver, effective February 26, 2007.

Table 1b. Numbers of registrants, STEMI patients, NSTEMI patients, catheterized (cathed) patients, and patients for whom PCI was attempted at Maryland hospitals performing primary PCI under waivers from the Maryland Health Care Commission, April 1 – June 30, 2007.

					PCI
2nd Quarter 2007 (April 1 - June 30)	Registrant <sup>1</sup>	STEMI <sup>2</sup>	NSTEMI <sup>3</sup>	Cathed <sup>4</sup>	Attempt <sup>5</sup>
Anne Arundel Medical Center	33	33	0	33	30
Baltimore Washington Medical Center <sup>6</sup>	29	29	0	14	9
Doctors Community Hospital	20	20	0	18	9
Franklin Square Hospital Center	37	37	0	31	22
Holy Cross Hospital	16	16	0	15	6
Howard County General Hospital	15	15	0	12	8
Johns Hopkins Bayview Medical Center	19	19	0	15	14
Mercy Medical Center <sup>7</sup>					
St. Agnes Hospital	29	29	0	27	18
Shady Grove Adventist Hospital	24	24	0	24	21
Southern Maryland Hospital Center	34	34	0	32	25

<sup>&</sup>lt;sup>1</sup> Registrant – patient entered in MHCC Registry.

<sup>&</sup>lt;sup>2</sup> STEMI – registrant presenting with ST-segment elevation myocardial infarction.

<sup>&</sup>lt;sup>3</sup> NSTEMI – registrant without documented STEMI.

<sup>&</sup>lt;sup>4</sup> Cathed – registrant undergoing diagnostic cardiac catheterization.

<sup>&</sup>lt;sup>5</sup> PCI attempt – any attempt to advance a guidewire across a coronary lesion.

<sup>&</sup>lt;sup>6</sup> Baltimore Washington Medical Center closed its Cardiac Catheterization Laboratory for equipment replacement from March 5, 2007 to May 14, 2007.

<sup>&</sup>lt;sup>7</sup> Mercy Medical Center relinquished its primary PCI waiver, effective February 26, 2007.

Table 2b. Median door-to-balloon (DTB) times, and number and percentage of patients by DTB  $\leq$  120 minutes or > 120 minutes at Maryland hospitals performing primary PCI under waivers from the Maryland Health Care Commission, April 1 – June 30, 2007. MHCC waiver requirements specify that 80% of appropriate patients should have a DTB time of  $\leq$  120 minutes.

	Median	<u>&lt;</u> 120	<u>&lt;</u> 120	> 120	> 120
	DTB	Minutes	Minutes	Minutes	Minutes
2nd Quarter 2007 (April 1 - June 30)	(minutes)	(N)	(%)	(N)	(%)
Anne Arundel Medical Center	77.5	26	87	4	13
Baltimore Washington Medical Center <sup>2</sup>	95	9	100	0	0
Doctors Community Hospital	70	8	89	1	11
Franklin Square Hospital Center	94	17	77	5	23
Holy Cross Hospital	94	5	83	1	17
Howard County General Hospital	110	7	88	1	13
Johns Hopkins Bayview Medical Center	105.5	10	71	4	29
Mercy Medical Center <sup>3</sup>					
St. Agnes Hospital	85.5	16	89	2	11
Shady Grove Adventist Hospital	95	21	100	0	0
Southern Maryland Hospital Center	86	24	96	1	4

<sup>&</sup>lt;sup>1</sup> Door-to-balloon time – elapsed time from arrival at hospital, if STEMI criteria are met, to time of first device use.

<sup>&</sup>lt;sup>2</sup> Baltimore Washington Medical Center closed its Cardiac Catheterization Laboratory for equipment replacement from March 5, 2007 to May 14, 2007.

<sup>&</sup>lt;sup>3</sup> Mercy Medical Center relinquished its primary PCI waiver, effective February 26, 2007.

Table 3b. Number of patients who underwent PCI at Maryland hospitals performing primary PCI under waivers from the Maryland Health Care Commission, April 1 – June 30, 2007. MHCC waiver requirements specify that institutions should perform an optimum of 49 primary PCI procedures annually except in areas of the state where access to a high-volume program is not readily available.

2nd Quarter 2007 (April 1 - June 30)	PCI Cases <sup>1</sup>
Anne Arundel Medical Center	30
Baltimore Washington Medical Center <sup>2</sup>	9
Doctors Community Hospital	9
Franklin Square Hospital Center	22
Holy Cross Hospital	6
Howard County General Hospital	8
Johns Hopkins Bayview Medical Center	14
Mercy Medical Center <sup>3</sup>	
St. Agnes Hospital	18
Shady Grove Adventist Hospital	21
Southern Maryland Hospital Center	25

<sup>&</sup>lt;sup>1</sup> PCI case – registrant who underwent percutaneous coronary intervention. The first device used is almost always a balloon-type device, but occasionally is a thrombectomy device.

<sup>&</sup>lt;sup>2</sup> Baltimore Washington Medical Center closed its Cardiac Catheterization Laboratory for equipment replacement from March 5, 2007 to May 14, 2007.

<sup>&</sup>lt;sup>3</sup> Mercy Medical Center relinquished its primary PCI waiver, effective February 26, 2007.

Table 1c. Numbers of registrants, STEMI patients, NSTEMI patients, catheterized (cathed) patients, and patients for whom PCI was attempted at Maryland hospitals performing primary PCI under waivers from the Maryland Health Care Commission, July 1 – September 30, 2007.

					PCI
3rd Quarter 2007 (July 1 - September 30)	Registrant <sup>1</sup>	STEMI <sup>2</sup>	NSTEMI <sup>3</sup>	Cathed <sup>4</sup>	Attempt <sup>5</sup>
Anne Arundel Medical Center	21	21	0	21	18
Baltimore Washington Medical Center	32	32	0	32	22
Doctors Community Hospital	12	12	0	9	4
Franklin Square Hospital Center	28	28	0	26	20
Holy Cross Hospital	26	26	0	26	17
Howard County General Hospital	25	25	0	23	17
Johns Hopkins Bayview Medical Center	26	26	0	23	15
Mercy Medical Center <sup>6</sup>					
St. Agnes Hospital	26	26	0	26	20
Shady Grove Adventist Hospital	25	25	0	23	21
Southern Maryland Hospital Center	19	19	0	18	16

<sup>&</sup>lt;sup>1</sup> Registrant – patient entered in MHCC Registry.

<sup>&</sup>lt;sup>2</sup> STEMI – registrant presenting with ST-segment elevation myocardial infarction.

<sup>&</sup>lt;sup>3</sup> NSTEMI – registrant without documented STEMI.

<sup>&</sup>lt;sup>4</sup> Cathed – registrant undergoing diagnostic cardiac catheterization.

<sup>&</sup>lt;sup>5</sup> PCI attempt – any attempt to advance a guidewire across a coronary lesion.

<sup>&</sup>lt;sup>6</sup> Mercy Medical Center relinquished its primary PCI waiver, effective February 26, 2007.

Table 2c. Median door-to-balloon (DTB) times, and number and percentage of patients by DTB  $\leq$  120 minutes or > 120 minutes at Maryland hospitals performing primary PCI under waivers from the Maryland Health Care Commission, July 1 – September 30, 2007. MHCC waiver requirements specify that 80% of appropriate patients should have a DTB time of  $\leq$  120 minutes.

	Median	<u>&lt;</u> 120	<u>&lt;</u> 120	> 120	> 120
	DTB	Minutes	Minutes	Minutes	Minutes
3rd Quarter 2007 (July 1 - September 30)	(minutes)	(N)	(%)	(N)	(%)
Anne Arundel Medical Center	84	16	89	2	11
Baltimore Washington Medical Center	87	17	77	5	23
Doctors Community Hospital	85	4	100	0	0
Franklin Square Hospital Center	69.5	17	89	2	11
Holy Cross Hospital	93	15	88	2	12
Howard County General Hospital	90	13	76	4	24
Johns Hopkins Bayview Medical Center	77	13	100	0	0
Mercy Medical Center <sup>2</sup>					
St. Agnes Hospital	83	18	90	2	10
Shady Grove Adventist Hospital	82	20	95	1	5
Southern Maryland Hospital Center	83	16	100	0	0

<sup>&</sup>lt;sup>1</sup> Door-to-balloon time – elapsed time from arrival at hospital, if STEMI criteria are met, to time of first device use.

<sup>&</sup>lt;sup>2</sup> Mercy Medical Center relinquished its primary PCI waiver, effective February 26, 2007.

Table 3c. Number of patients who underwent PCI at Maryland hospitals performing primary PCI under waivers from the Maryland Health Care Commission, July 1 – September 30, 2007. MHCC waiver requirements specify that institutions should perform an optimum of 49 primary PCI procedures annually except in areas of the state where access to a high-volume program is not readily available.

PCI Cases <sup>1</sup>
18
22
4
19
17
17
13
20
21
16

<sup>&</sup>lt;sup>1</sup> PCI case – registrant who underwent percutaneous coronary intervention. The first device used is almost always a balloon-type device, but occasionally is a thrombectomy device.

<sup>&</sup>lt;sup>2</sup> Mercy Medical Center relinquished its primary PCI waiver, effective February 26, 2007.